

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P163786

Luminaire Tested: **LDRL-SL4-E01-E-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163786
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL4-E01-E-7030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (21) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1802.7 lumens
Efficiency: N/A
Efficacy: 73.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

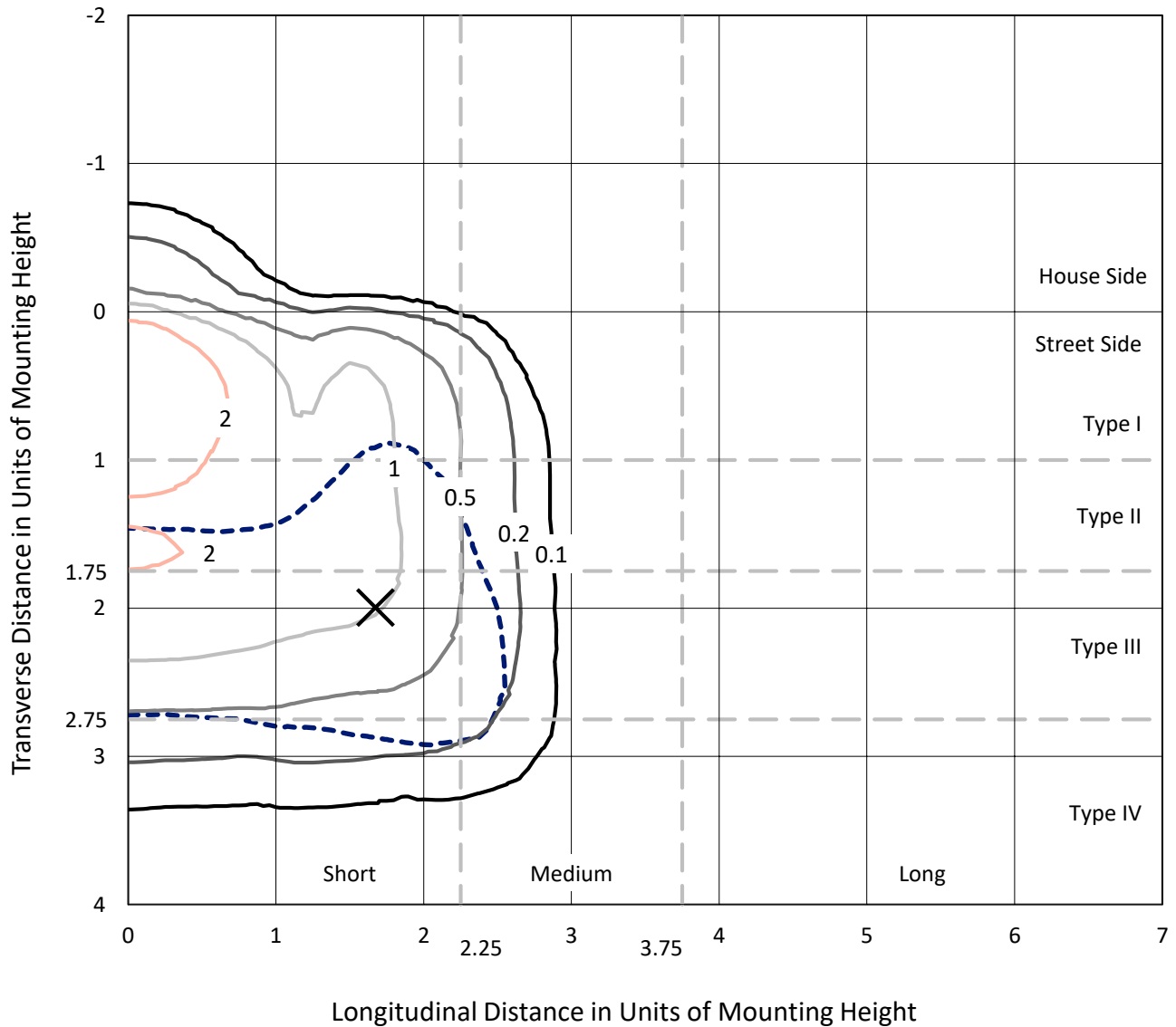
Input Watts (W): 24.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

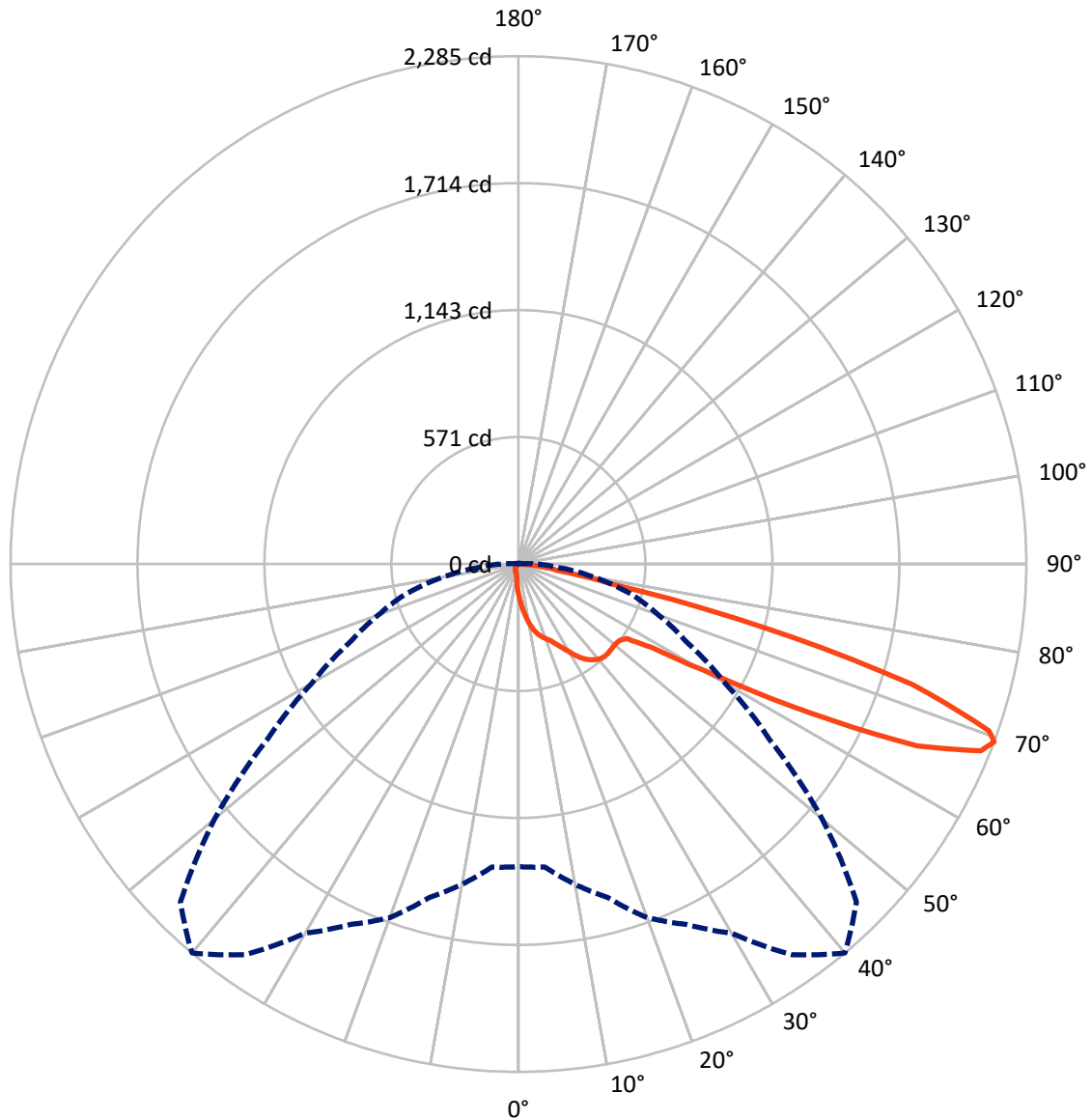


Based on 10 foot mounting height. Maximum calculated value = 4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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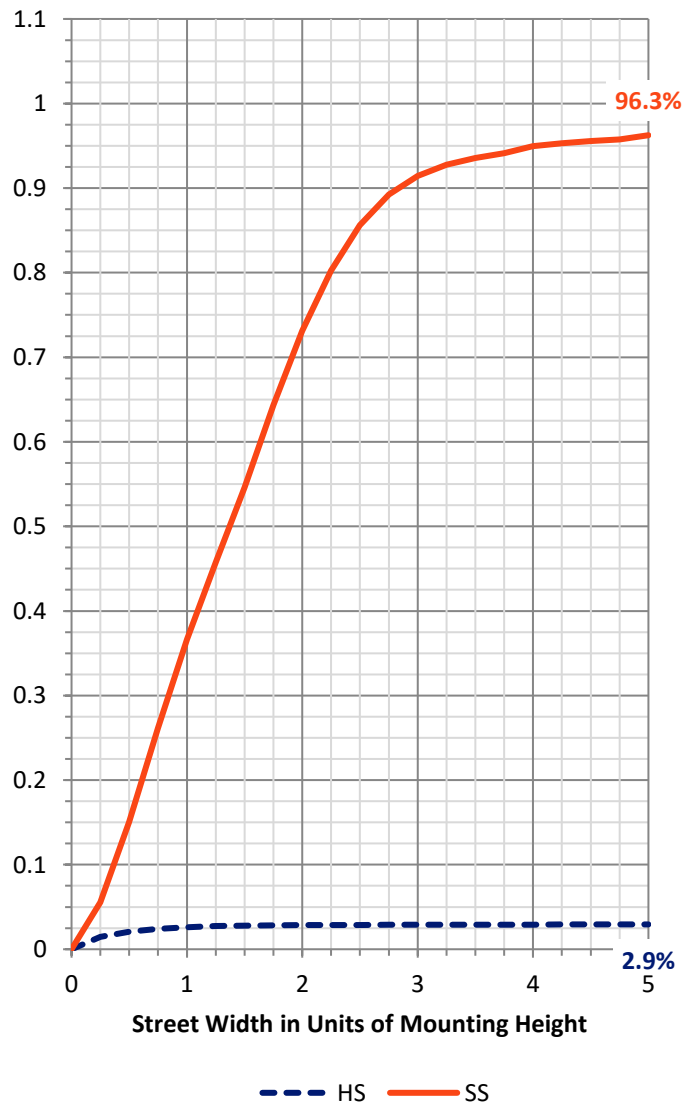
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	53.7	0.0	53.7
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	1749.0	0.0	1749.0
	% Fixture	97.0	0.0	97.0
Total	Lumens	1802.7	0.0	1802.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.0	0.8
10°-20°	48.2	2.7
20°-30°	92.3	5.1
30°-40°	153.6	8.5
40°-50°	207.8	11.5
50°-60°	325.0	18.0
60°-70°	668.1	37.1
70°-80°	268.8	14.9
80°-90°	24.9	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	1802.7	100.0
0°-180°	1802.7	100.0



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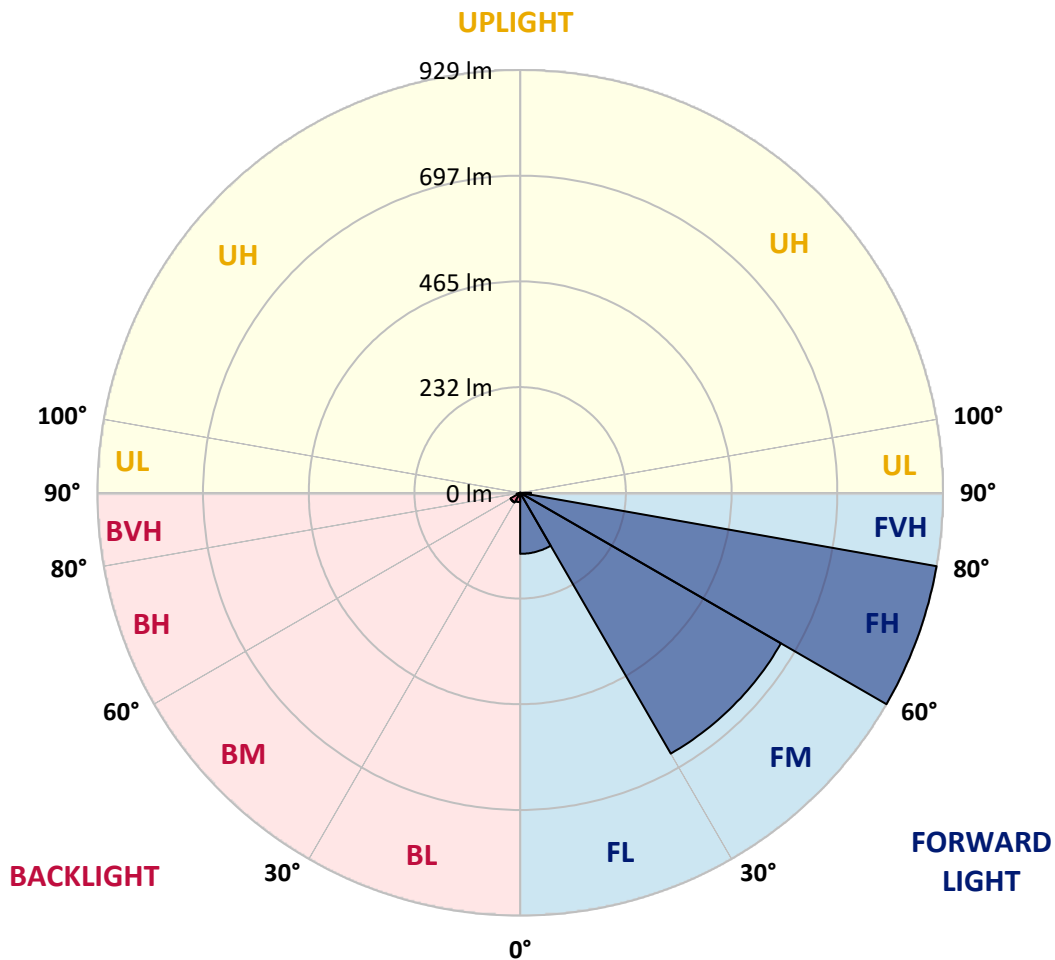
CATALOG NUMBER: LDRL-SL4-E01-E-7030-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	134.2	7.4			
FM	(30°-60°)	661.8	36.7			
FH	(60°-80°)	929.1	51.5			G1/1800
FVH	(80°-90°)	23.9	1.3			G1/100
BL	(0°-30°)	20.4	1.1	B0/110		
BM	(30°-60°)	24.5	1.4	B0/220		
BH	(60°-80°)	7.8	0.4	B0/110		G0/110
BVH	(80°-90°)	0.9	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1
2.5°	181.6	179.5	177.2	177.2	174.2	174.2	172.5	167.7	167.1	164.5	161.8
5°	231.8	230.1	227.1	224.4	222.1	217.9	215.0	209.4	203.2	197.3	191.9
7.5°	280.8	280.0	274.6	273.7	269.9	263.1	257.2	248.9	238.3	230.1	220.3
10°	326.3	324.3	323.1	318.0	312.4	305.1	295.9	285.9	273.5	260.5	246.6
12.5°	362.3	361.2	355.9	353.8	347.9	340.5	329.0	316.0	303.6	286.8	270.5
15°	389.2	387.2	383.6	380.4	373.3	366.8	356.2	342.0	326.9	308.6	289.1
17.5°	411.7	407.8	406.9	401.9	394.5	386.9	375.0	362.1	344.3	326.0	304.8
20°	441.8	436.5	434.7	427.3	418.8	408.1	394.5	378.3	359.7	339.6	317.8
22.5°	477.2	473.4	469.6	463.1	452.1	437.1	417.3	399.6	375.9	353.8	330.2
25°	527.4	524.2	518.0	509.1	495.5	477.5	453.6	427.6	399.8	371.5	343.7
27.5°	576.2	573.2	568.8	562.0	546.6	526.8	497.3	464.2	429.1	394.8	364.1
30°	621.9	619.3	614.8	608.1	594.5	575.0	541.6	506.2	462.5	422.6	385.7
32.5°	671.2	670.4	665.3	655.6	643.8	617.5	581.2	543.1	498.8	452.7	409.6
35°	727.1	720.3	715.5	705.8	685.7	657.7	615.1	573.5	526.8	479.6	431.4
37.5°	774.3	767.8	761.9	749.5	725.0	689.3	641.1	595.4	547.2	499.1	450.1
40°	808.9	805.6	798.5	782.3	754.8	712.3	660.3	610.4	562.0	513.6	465.1
42.5°	834.6	829.5	821.6	804.7	772.2	723.8	668.0	616.6	568.8	522.4	474.9
45°	844.0	839.9	832.5	814.2	779.0	727.1	667.7	614.8	569.1	525.1	481.4
47.5°	838.4	834.3	827.8	810.6	776.1	723.2	662.4	609.8	566.1	526.0	487.3
50°	819.8	817.4	812.4	797.9	766.9	715.8	657.7	607.2	565.5	530.4	495.5
52.5°	818.0	816.5	810.3	795.9	764.3	713.5	657.1	608.6	570.6	536.0	501.4
55°	999.6	978.7	931.7	891.9	826.3	748.3	686.9	632.6	591.8	558.1	533.9
57.5°	1420.8	1389.4	1327.7	1251.8	1101.2	953.3	834.9	749.2	707.0	691.6	700.8
60°	1618.0	1612.4	1602.7	1566.6	1489.6	1362.3	1220.5	1067.3	1005.8	1000.5	1019.1
62.5°	1711.6	1708.1	1711.1	1706.6	1682.7	1645.5	1604.7	1538.6	1477.7	1438.5	1355.2
65°	1754.7	1757.1	1773.9	1787.2	1790.2	1799.9	1829.8	1912.2	1972.4	1871.1	1639.9
67.5°	1645.2	1659.1	1697.8	1746.2	1802.9	1857.8	1946.4	2120.1	2243.8	2124.8	1796.4
69°	1362.0	1368.8	1463.3	1554.5	1693.0	1789.9	1918.4	2146.0	2285.1	2150.8	1784.0
70°	1072.3	1078.5	1179.8	1303.8	1538.0	1662.6	1830.6	2102.0	2246.5	2116.2	1720.2
72.5°	483.7	474.9	510.6	577.0	831.6	1029.5	1323.3	1703.1	1853.4	1695.4	1287.0
75°	337.8	334.0	337.8	338.1	377.7	487.3	614.8	923.1	1141.7	985.2	614.8
77.5°	261.7	259.0	256.3	253.4	258.1	289.1	301.5	327.5	425.3	402.2	234.5
80°	207.0	204.6	211.1	209.1	209.1	212.6	210.3	200.5	182.2	168.9	151.2
82.5°	96.3	96.9	96.9	105.1	126.7	147.9	154.7	145.0	128.8	109.6	88.3
85°	9.2	10.3	17.4	26.9	53.4	60.2	60.5	50.2	50.2	39.6	31.9
87.5°	0.0	0.3	0.3	0.3	2.6	7.4	6.2	1.8	0.9	0.9	1.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1
2.5°	157.1	156.2	152.7	149.1	145.9	142.3	139.1	135.9	132.3	129.6	126.4
5°	183.7	177.2	169.8	162.7	155.6	148.3	140.6	133.8	126.7	120.2	114.0
7.5°	210.6	197.9	187.8	175.1	163.6	152.1	141.5	130.5	120.5	111.0	102.2
10°	233.3	217.9	202.3	186.0	169.5	154.2	139.4	126.4	113.1	101.6	90.7
12.5°	251.9	232.4	213.2	192.8	174.2	154.7	136.4	120.8	105.1	92.1	80.9
15°	268.7	246.3	223.3	199.6	176.0	153.9	133.5	114.0	98.0	83.3	70.6
17.5°	282.3	256.6	230.6	204.1	178.7	152.7	129.6	109.3	90.7	75.3	62.9
20°	294.1	267.3	239.2	209.4	180.4	152.4	126.4	103.4	84.2	67.9	55.8
22.5°	305.1	278.2	248.1	216.2	183.1	152.1	123.4	98.9	78.5	62.3	50.2
25°	317.5	289.1	257.5	223.3	187.8	153.3	121.7	95.4	73.5	57.0	45.8
27.5°	331.3	301.5	268.7	232.1	194.0	155.6	121.1	91.6	69.1	52.0	42.2
30°	350.8	316.3	280.0	241.0	199.6	158.3	120.5	89.2	64.7	48.1	38.7
32.5°	368.0	330.7	292.4	250.1	205.8	161.0	120.2	85.9	60.5	44.3	36.0
35°	386.0	344.0	303.0	259.0	211.1	163.9	119.9	83.6	56.7	40.5	33.4
37.5°	401.6	355.3	311.3	266.7	217.0	166.6	120.2	81.5	53.2	37.2	31.0
40°	414.9	366.8	320.4	273.7	223.3	170.7	120.5	79.4	49.6	34.3	28.9
42.5°	426.7	377.7	330.2	281.7	230.3	175.4	122.3	77.7	46.7	31.6	26.9
45°	435.9	387.8	340.8	292.9	241.9	183.1	125.5	76.5	43.7	29.2	25.1
47.5°	445.3	402.5	358.8	310.7	258.7	195.2	131.1	76.2	41.3	27.5	23.6
50°	458.3	417.3	374.7	328.7	274.1	207.6	137.9	76.5	38.4	25.7	22.1
52.5°	467.8	432.3	395.4	360.0	310.7	245.4	164.2	81.8	36.9	24.2	20.4
55°	523.6	517.4	518.3	524.2	486.1	417.6	274.6	118.1	43.4	27.5	20.1
57.5°	738.3	760.1	772.8	772.5	709.6	588.6	368.8	151.8	48.4	31.9	23.9
60°	1020.6	1004.1	980.7	923.1	839.6	671.8	412.6	163.3	41.9	25.4	21.8
62.5°	1270.1	1173.3	1087.3	994.0	884.5	700.8	421.4	162.4	36.6	19.2	15.4
65°	1425.8	1251.5	1112.7	995.8	866.8	676.6	398.7	149.1	31.0	15.7	12.7
67.5°	1463.0	1209.3	1012.9	863.8	724.1	526.5	292.7	112.2	24.2	13.0	11.2
69°	1381.8	1074.9	839.3	670.1	526.8	349.4	181.0	70.9	18.6	11.8	10.3
70°	1271.0	935.0	683.6	537.8	390.1	245.4	126.7	49.9	15.1	10.9	9.4
72.5°	817.7	491.1	336.1	233.9	161.0	97.7	49.6	22.5	11.5	9.2	7.7
75°	317.2	181.6	131.7	100.1	78.3	54.3	30.1	14.5	9.7	7.7	5.9
77.5°	156.2	119.6	97.7	67.0	39.0	24.2	16.2	11.2	8.0	5.6	3.8
80°	123.4	82.1	49.0	30.4	23.0	17.4	12.4	9.2	5.9	3.5	2.6
82.5°	63.2	34.5	25.4	20.7	17.1	13.6	10.0	6.5	3.8	2.4	2.1
85°	19.8	14.5	13.0	12.7	11.8	9.7	7.1	4.1	2.4	1.5	1.5
87.5°	1.5	2.1	2.6	2.1	2.4	2.1	2.6	1.8	1.2	1.2	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1	136.1
2.5°	124.0	120.5	117.2	115.2	111.3	109.9	108.4	107.8	105.1	105.7	103.4
5°	108.4	102.2	97.5	92.7	88.3	85.1	82.4	79.2	76.5	75.3	72.9
7.5°	94.2	86.2	80.0	75.0	69.7	65.6	62.0	59.7	57.3	54.9	53.7
10°	81.8	73.2	66.1	61.1	56.1	52.6	49.9	48.1	46.7	45.8	45.5
12.5°	70.3	62.0	55.5	51.1	47.3	45.5	44.3	43.4	43.1	42.8	42.8
15°	61.4	53.2	48.1	44.9	43.1	42.2	41.9	41.3	40.8	40.5	40.5
17.5°	53.2	46.9	43.4	41.6	40.8	40.2	39.6	39.0	38.4	38.1	38.1
20°	47.5	42.5	40.8	39.6	38.7	38.1	37.2	36.6	36.3	36.0	35.7
22.5°	43.1	39.9	38.7	37.8	36.6	35.7	35.1	34.5	34.0	33.7	33.4
25°	39.9	37.8	36.9	35.7	34.5	33.7	32.8	31.9	31.3	31.0	30.4
27.5°	37.5	36.0	34.9	33.4	32.2	31.3	30.4	29.5	28.9	28.4	28.1
30°	35.4	34.0	32.5	31.3	29.8	28.9	27.8	26.9	26.6	26.0	25.4
32.5°	33.4	31.9	30.4	28.9	27.5	26.3	25.7	24.5	23.9	23.6	23.0
35°	31.0	29.5	27.8	26.6	25.1	23.9	23.0	22.1	21.6	21.0	20.7
37.5°	28.9	27.2	25.4	23.9	22.7	21.6	20.7	19.8	19.2	18.6	18.3
40°	26.6	24.8	23.0	21.6	20.4	19.5	18.6	17.7	17.1	16.8	16.8
42.5°	24.5	22.5	20.7	19.5	18.6	17.4	16.5	15.7	15.4	15.1	15.4
45°	22.5	20.4	18.9	17.7	16.8	15.7	14.8	14.2	13.9	14.2	14.5
47.5°	20.7	18.6	17.1	16.2	15.4	14.5	13.6	13.0	13.0	13.6	14.2
50°	18.9	16.8	15.7	15.1	14.2	13.3	12.1	11.8	12.1	12.7	13.3
52.5°	17.1	14.8	13.9	13.6	12.7	11.8	10.9	10.6	10.9	11.5	11.2
55°	15.4	13.0	12.7	12.4	11.5	10.3	9.4	9.4	9.4	9.2	8.6
57.5°	14.8	11.5	11.2	10.9	10.0	8.9	8.3	7.7	7.4	6.5	6.2
60°	15.4	10.3	10.3	9.7	8.9	7.7	6.8	5.9	5.3	4.7	4.7
62.5°	12.4	9.4	9.2	8.6	7.4	6.2	5.3	4.4	4.1	3.8	3.8
65°	10.0	8.6	8.0	7.1	6.2	5.0	4.1	3.5	3.3	3.3	3.5
67.5°	9.2	7.7	6.8	5.9	5.0	3.8	3.3	3.0	3.0	3.3	3.3
69°	8.6	7.1	6.2	5.3	4.4	3.5	3.0	3.0	3.0	3.0	3.3
70°	8.0	6.8	5.9	5.0	3.8	3.0	2.6	2.6	3.0	3.0	3.3
72.5°	6.2	5.3	5.0	4.1	3.0	2.6	2.4	2.6	2.6	3.0	3.0
75°	4.7	3.8	3.8	3.3	2.4	2.1	2.1	2.4	2.4	2.6	2.6
77.5°	3.3	2.6	2.6	2.4	2.1	1.8	1.8	2.1	2.4	2.4	2.6
80°	2.4	2.1	1.8	2.1	1.8	1.5	1.8	2.1	2.1	2.4	2.4
82.5°	1.8	1.8	1.8	1.8	1.5	1.5	1.8	1.8	2.1	2.4	2.4
85°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.8	2.1	2.1
87.5°	0.9	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	136.1	136.1	136.1	136.1
2.5°	102.8	102.5	101.3	101.6
5°	72.1	70.3	71.5	71.2
7.5°	52.9	52.6	52.3	52.9
10°	45.2	45.2	44.9	45.2
12.5°	42.5	42.5	42.5	42.5
15°	40.5	40.5	40.2	40.2
17.5°	38.1	38.1	38.1	37.8
20°	35.7	35.4	35.4	35.4
22.5°	33.1	32.8	32.8	32.8
25°	30.4	30.1	30.1	30.1
27.5°	27.8	27.5	27.2	27.2
30°	25.1	24.8	24.5	24.5
32.5°	22.5	22.1	21.8	21.8
35°	20.1	20.1	19.8	19.5
37.5°	18.0	18.0	18.0	18.0
40°	16.5	16.8	16.8	16.8
42.5°	15.7	15.9	16.2	16.5
45°	15.1	15.7	15.9	15.9
47.5°	14.8	15.1	15.4	15.4
50°	13.6	13.3	13.3	13.3
52.5°	10.9	10.3	10.0	9.7
55°	8.0	7.7	7.1	7.1
57.5°	5.6	5.6	5.3	5.3
60°	4.4	4.4	4.1	4.4
62.5°	3.8	3.8	3.8	3.8
65°	3.5	3.5	3.5	3.5
67.5°	3.5	3.5	3.5	3.5
69°	3.3	3.3	3.3	3.3
70°	3.3	3.3	3.3	3.3
72.5°	3.0	3.0	3.0	3.0
75°	2.6	3.0	3.0	3.0
77.5°	2.6	2.6	2.6	2.6
80°	2.4	2.4	2.6	2.6
82.5°	2.4	2.4	2.4	2.4
85°	2.1	2.1	2.4	2.4
87.5°	1.8	1.8	2.1	2.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)